2. $f(x)=\dfrac{1}{u(x).\sqrt{1+x^2}}$

$f(x)=\dfrac{u^1(x)}{u^2(x)}$

$d'où$

$F(x)=\dfrac{-1}{u(x)}$

$F(x)=\dfrac{-1}{x+\sqrt{1+x^2}}$

$g(x)=\dfrac{u^2(x)}{\sqrt{1+x^2}}$

$g(x)=u^2(x).\dfrac{1}{\sqrt{1+x^2}}$

$g(x)=u^2(x)\ \dfrac{u^1(x)}{u(x)}$

$g(x)=u^1(x).u(x)$

$d'où$

$G(x)=\dfrac{1}{2}u^2(x)$

$G(x)=\dfrac{1}{2}(x+\sqrt{1+x^2})^2$

EX 17 :

$f(x)=x.Cos\,x$

$g(x)=x.\sin x$

1. $f'(x)+g(x)=Cosx-x\sin x+x\sin x$

$=Cos\,x$

$d'où\quad g(x)=Cos\,x-f'(x)$

$G(x)=\sin x-(f(x))$

$G(x)=\sin x-x\,Cos\,x$

2. $g'(x)-f(x)=\sin x+x\,Cos\,x-f(x)$

$=\sin x$

$d'où\quad f(x)=g'(x)-\sin x$

$F(x)=g(x)-Cos\,x$

$F(x)=x\sin x-Cos\,x$